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TECH CENTER 1600/2900

SEQUENCE LISTING

<110> Montminy, Marc R.

<120> Methods for Treating Diabetes Mellitus

<130> SALK1650-1

<140> US 08/961,739

<141> 1997-10-31

<150> US 194,468

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<170> FastSEQ for Windows Version 3.0

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	tgcagcagca					6780
	ctgctccaat					6840
	ctaatatcca					6900
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Asp	His	Arg 35	Phe	Phe	Asp	His	Cys 40	Cys	Asp	Leu	Leu	Lys 45	Pro	Pro	Pro
Pro	Pro 50	Pro	Ser	Pro	Pro	Gly 55	Glu	Leu	Leu	Pro	Phe 60	Phe	Thr	Val	Gly
Gly 65	Leu	Val	Pro	Pro	Pro 70	Pro	Pro	Asp	Ala	Ala 75	Ala	Gln	Thr	Asn	Cys 80
Cys	Glu	Leu	Leu	Leu 85	Arg	Arg	Gln	Gln	Ala 90	Leu	Leu	Leu	Leu	Leu 95	Leu
Ser	Thr	Gln	Gln 100	Ile	Gly	Gly	Cys	Glu 105	Cys	Cys	Ala	Ala	Leu 110	Leu	Gln
Gln	Gln	Pro 115	Trp	Trp	Trp	Trp	Trp 120	Trp	Trp	Gly	Ser	Ser 125	Gly	Ser	Arg
Arg	Ser 130	Thr	Asn	Asn	Gly	Gln 135	Gln	Val	Pro	Pro	Gly 140	Lys	Ser	Ser	Ser
Ser 145	Ser	Pro	Leu	Asn	Asn 150	Arg	Arg	Leu	Leu	Gln 155	His	His	Asn	Leu	Pro 160
Pro	Thr	Gly	Ser	Ser 165	Ala	Pro	Pro	Pro	Pro 170	Pro	Pro	Glý	Pro	Leu 175	Leu
Pro	Ala	Ala	Pro 180	Ser	Thr	Thr	Ile	His 185	Lys	Lys	Gln	Lys	Lys 190	Ser	Arg
Ala	Ala	Ala 195	Ala	Ala	Ala	Asp	Gln 200	Gln	Val	Leu	Pro	Pro 205	Ser	Gln	Thr
Thr	Thr 210	Trp	Trp	Ser	Ala	Ala 215	Asn	Phe	Phe	Phe	Phe 220	Phe	Asn	Gln	Thr
Thr 225	Pro	Arg	Pro	Pro	Ser 230	Ile	Ile	Asn	Ser	Gly 235	Gly	Leu	Asn	Asn	Ile 240

Arg Arg Arg Arg Arg Asn Lys Gly Gly Ala Gln Gln His Glu Trp Trp Leu Leu Gly Gly Ala Gly Gly Arg Lys Gly Gly Gly Gly Gly Trp Asn Asn Pro Thr Leu Leu Pro Ala Met Met Gly Gly Gln Ala Val Val Leu Ala Glu Glu Glu Glu Thr Leu Thr Thr Gly Phe Pro Pro Lys Trp Trp Gly His Ala Ala Thr Lys Tyr Tyr His Arg Arg Arg Arg Arg Glu Ala Lys Met Met Asn Asp Trp Trp Pro Gln Val Val Phe Gly Gly Thr Leu Asn Trp Trp Gly Ser Arg Arg Gly Ala Thr Thr Ser Glu Glu Pro Ser Ser Lys Gln Gln Gln Gln Ser Met Val Val Phe Thr Thr Leu Phe Phe Thr Asp Ile Ile Glu Tyr Phe Phe Ser Pro Pro Pro Pro Pro Cys Gln Ile Ile Ser Gln Gln Ala Asn Ile Ile Trp Glu Leu Leu Pro Thr Thr Ser Asn Cys Cys Cys Cys Cys Arg Pro Pro Gln Gln Thr Thr Glu Lys Arg Arg Thr Asp Asp Ser Ser Ser Ser Val Leu Leu Leu Leu Leu Leu His Ala Ala Gln Met Ser Ser Asp Glu Glu Gln Ala Asn Asn Arg Gly Ser Xaa Pro Val Val Val Val Val Ser His Thr Thr Arg Thr Thr Glu Lys Arg Arg Ile Thr Thr Thr His His Ser Gly Ser Ser Ser Ser Ser Ser Leu Leu Lys Leu Pro Pro Cys Ala Ser Ser Thr Thr Thr Ser Ser Leu Leu Trp Lys Asn Asn Asn Asn Cys Thr Arg Arg Leu Ser Ser Phe Ala Ala Pro Leu Lys Lys Cys Gln Ser Glu Glu Glu Glu Glu Glu Asn Lys Pro Pro Leu Gly Gly Ser Ser Glu Phe Lys Lys Thr Ile Ile Phe Cys Trp Trp Trp Trp Trp Arg Ala Ala Arg Met Pro Pro Ser Leu Ser Ser Pro Lys Lys Pro Thr Thr Ser Ser Met Met Met Met Gln Arg Ala Ala Cys Cys Ser Ser Asp Ser Ser Tyr Met Asn Asn Ala Ser Asp Asp Ser Cys Cys Cys Cys Cys Leu Arg Phe Phe Gly Gln Gln Thr Ser Thr Thr

	610					615		•			620				
Leu		Pro	Pro	Gln	Gln					Ser	Ser	Ser	Ser	Ser	Cys
625					630					635					640
Pro	Pro	Glu	Thr		Thr	Met	Ser	Val		Ser	Arg	Arg	Glu	Gln	Gln
			_	645			_	_	650	_	_	_,	_	655	
Asp	Gln	Gln		Gln	Gln	Gln	Pro		Asn	Asn	Asp	Phe		Arg	GIn
_	.	D	660	0	O	C1	C1	665	Ш	т1.	uio	шіс	670	пiс	uic
Leu	ьеи	675	Thr	ser	ser	СТА		Tyr		iie	птъ	685	пто	His	птъ
піс	Mot		Mot	Sar	Δen	Δsn				Glu	Δla		Ser	Thr	Tle
1113	690	Mec	Mec	JCI	11511	695	111			OLU	700	001	001		
Ile		Ser	Ser	Ser	Ser		Ser	Ser	Ser	Phe		Ala	Leu	Val	Val
705	- 1 -									715					720
	Lys	Gly	Gly	Ala						Arg	Arg	Arg	Arg	Arg	Ser
	_			725					730					735	
His	Leu	Leu				Phe	Lys							Arg	Pro
		_	740			_		745					750	~ 1	_
Pro	Gln		Leu	Leu	Leu	Leu		Lys	TTE	Ala	Ala		Glu	Glu	Pro
C1	C	755	Mot	T 0.11	7\ ~~ ~	7 ~~	760	C1,,	C1.,	7 ~ ~	шіс	765	17 - 1	Val	Val
сту	770	Cys	Met	ьец	Arg	775		Giu		Arg	780	vaı	Val	var	vai
Va 1		Val-	Cvs	Cvs	Tle					Tvr		Tvr	Phe	Ile	Ile
785		• • •	0,10	010	790		1			795	- 1				800
	Arg	Lys	Lys	Tyr	Lys				Ile	Ile	Gln	Lys	Glu	Glu	Arg
		-	-	805	_				810					815	
Arg	Lys	Lys	_	Gly	Gly	Arg	Leu		His	Ala	Arg	His		Trp	Val
			820	_				825				_	830	_	_
Val	Val		Уal	Val	Ser	Gln		Leu	Pro	Ala	Ala		Gly	Ser	Ser
D	T	835 Date	D	D	Dwa	17-1	840	C	C	Cvc	Cvrc	845 Cvc	Thr	Sor	Sor
Pro	ьеи 850	Pro	Pro	PIO	PIO	855	Cys	Cys	Cys	Cys	860	Cys	1111	Ser	Ser
Mot		Pro	Pro	Pro	T.e.11		Pro	Glu	Ser	Ser		Ara	-Phe	Phe	Gln
														Trp	
-				885					890					895	
Glu	Val	Gln	Leu	Leu	Thr	Gly	Thr	Thr	Trp	Asp	Asp	Asp		Asp	Asp
			900					905					910		
Val	Gln		Pro	Pro	Met	Met		Leu	Cys	Cys	Arg		Thr	Met	Ala
- 1		915	61	C1	C1	C1	920	C1	C1	114.0	11.5	925	Tou	uio	ціс
Ата		Ser	СТА	GTĀ	СТА	935	СТА	СТУ	сту	птѕ	940	ьeu	ьeu	His	птэ
Mot	930 Pro	Gln	Gln	Sar	T.vs		Trn	Δla	Δla	His		Asn	Asn	Asn	Asn
945	110	GIII	GIII	561	950	цуо	112	1114	1114	955					960
	Asn	Ile	Met	Met		Gly	Thr	Thr	Leu		Arg	Gln	Phe	Leu	
				965		-			970		_			975	
Thr	Glu	Pro	Pro	Phe	His	His	His	His	His	His	Pro	Val		Gly	Met
			980					985					990		

Ser Ser Glu 995	Gln Cys Cy		Gly Gly	Pro Ala	Ala Pro 1005	Gly Arg
Arg Arg Arg 1010	Arg Arg Ph	e Thr Thr				Ala Ala
Pro Leu Thr 1025	Thr Leu Al	a Pro Pro			Ala Ser	Ser Ala 104
Ala Leu Leu	His Gln Gl 1045	n Thr Gln	Ser Ser 1050		Pro Pro	Leu His 1055
His His His	His His Le 1060		Pro Ala 1065		His Ala 1070	
Ser Asn Ile 1075		_	Asn Asp		4005	Asp Ser
Ser Ser Gln 1090	Gln Leu Le		Pro Pro			His Leu
Leu Gln Thr 1105	Pro Pro Pro 11		Thr Pro		Trp Leu	
Pro Ala Ala		r Thr Glu		Pro Gln		Ser Ser 1135
Ser Ser Gln		s Ala Gln		Ser Thr		
Pro Val Gln 1155			Cys Cys		Tyr Ser 1165	Ser Ser
His His His 1170	Gln Gln Pr		Cys Cys	Ile Leu 1180		Pro Gly
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Ala Ala Arg	1220		1225		1230	0
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Arg Gly Gly 1250		1255		1260)	
Phe Phe Lys			Val Arg		Asp Ile	
1265	12		Clu Dro	1275	Sor Ara	128
Arg Arg Arg	1285	d ser ser	1290		Ser Arg	1295
Arg Asn Asn	Glu Val Va 1300	l Ser Gly	Ser Ser 1305	Ser Ser	Ser Ser 131	
Gly Lys Arg		r Asn Asp 132		Leu Leu	Asn Gln 1325	His His
Pro Ser Gln 1330		n Gln Pro 1335	Arg Lys	Lys Asn 1340		Arg Arg
Leu Arg Gln	Gln Thr Ty		Leu His			Asp Asp
1345	13	50		1355		136
Arg Val Phe	Phe Leu Ph	e Val Val	Pro Val	Val Ser	Ser Ala	Ala Ala

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Ala Ala Ala Arg				u Ser
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Ser Trp Thr Phe 1395	Phe Thr Ile	Lys Lys Lys Lys 1400	Lys Arg Lys Le	u Leu
His Arg Ala Ala 1410	Ile Lys Lys 1415		Cys Gly Ser Gl	y Gly
Gly Gly Gly Gly				s Arg
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Pro Pro Val Tyr	Tyr Ile Leu 1445	Gln Gln Gln	Gln Gln Thr Cy 14	
Arg Ser Leu Leu		Ile Pro Cys Cys	Cys Ser Leu Le	u Gly
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1490		•	1500	
Phe Leu Leu Asp				
1505				152
His Leu Trp Glu	1525	1530	15	35
Glu Asn Val Val				
1540		1545		
		1560	1565	
Asn Tyr Leu Arg 1570		Asn Asn Asn Asn	Asn Leu Leu Th 1580	r Thr
Lys Glu Glu Trp	Pro Glu Glu	Cys Ile Arg Arg	Cys Val Val Th	r Leu
1585	1590	159		160
His Leu Leu Leu				
_	1605			15
Leu Leu Arg Pro				n Cys
Cys Arg Gly Gly	=	1625		u Luc
1635	GIN THE THE	1640	1645	и шуз
Phe Phe Ala Ala	Pro Pro Ile			e Cvs
1650	1655		1660	3
Cys Cys Cys Cys	Cys Ser Gly	Gly Pro Ala Gln	Gln Lys Thr Va	l Val
1665	1670	167.		168
Gly Gln Gln Arg	Glu Ser Arg 1685	Phe Phe Phe Phe 1690	Phe Val Asp Se	
Arg Asp Val Val				
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Leu Leu Leu		Arg Ser Ser Gly	Val Val Cys Va	l Leu
1715		1720	1725	
Leu Leu Gly Cys	_			r Ser
1730	1735		1740	

Cys Pro Pro Thr Lys Tyr Tyr Gly Cys Val Val His Ile Ile Irp Thr Thr Ile His Phe Phe Phe Phe Phe Arg Pro Pro Leu Pro Pro Pro Gln Leu Leu Tyr His Glu Glu Pro His Arg Arg Ile Ser Ser Ser Ser Ser Met Arg Arg Leu Val Val Cys Asp Ser Ser Ile Phe Gly Gly Cys Pro Pro Lys Arg Arg Arg Arg Arg Leu Leu Ser Phe Ile Ile His Pro Pro Pro Glu Glu Ser Pro Asn Asn Lys Arg Leu Leu Leu Leu Gln Glu Trp Trp Gln Glu Asp Asp Trp Thr Thr Ala Phe Ala Ala Glu Asp His His Thr Thr Thr Thr Thr Thr Arg Thr Ser Ser Lys Gln Glu Arg Arg Arg Gly Ser Arg Arg Ala Lys Lys Val Ala Leu Leu Leu Leu Leu Arg Arg Ile Ser Gly Gly Asn Val Leu Leu Arg Lys Lys Leu Arg Asn Asn Glu Lys Arg Arg Val Val Ala Ala Ser Ser Asp Ser Ala Val Val Val Val Val Val Thr Ala Ala Asn Ala Ala Glu Lys Glu Glu Thr Arg Arg Arg Asn Lys Lys Gln Lys Gln Gln Gln Gln Gln Pro Pro Pro Thr Arg Arg Lys Pro Ser Ser Ala Gln Gln Phe Pro Thr Thr Leu Ser Gln Gln Gln Gln Lys Leu Tyr Tyr His His Gly Gly Ser Thr Thr Glu Val Phe Phe Cys Asp Ser Ser Cys Met Met Met Met Met Gly Leu Leu Ser Thr Thr Ala Pro His His Trp Thr Leu Leu Pro Leu Leu His Gly Gly Glu Met Met Phe Leu Thr Thr Gly Gln Gln Thr Ser Thr Thr Glu Phe Ser Ser Ser Ser Ser Leu Arg Arg Leu Gln Met Met Pro Leu Leu Cys Met Leu Leu Gly Ala Ala Ala His Arg Arg Arg Arg Arg Arg Thr Ala Ala Val Tyr Tyr Leu Gln Ala Asn Thr Thr Val Glu Glu Thr Leu Ala Ala Ala Ala Ala Ala His Cys Cys Val Arg Thr Thr Asp Leu Cys Cys Gln Leu Leu Thr

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-	Gly	Ala	Ala	Asp	_		Glu	GIn	GIN			vaı	Ser	ser	
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Ser	Ser	Ser	Ser	Pro	Arg	Arg	Pro	Gln				Ala	Ala		
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Ser	Ser	Arg	Cys	Cys	Pro	Val	Pro	Pro	Pro	Pro	Pro	Pro	Ala	Cys	Cys
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Mejc	_	_	цуз	цуз	БуЗ	2215		VUI	vul	1114	2220		0111		
7.1 .	2210		m 1	m 1	m			Mat	C1 5	C			Cva	Cvc	Cvc
	Arg	ьys	Thr	Thr				мес	GIII			Cys	Cys	Cys	
222				_)		_	_	223		_	_,	-1	224
Ser	Ser	Ser	Ser			Leu	Leu	Leu				Asn	Thr		
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Glu	Glu	Met	Pro	Pro	Pro	Pro	Pro	Pro	Ala	Leu	Leu	Ala	Ser	Thr	Thr
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Lvs	His	Asn	Asn	Pro	Pro	Pro	Ser	Arq	Ser	Ser	His	Cys	Leu	Leu	Leu
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T.e.n	Leu			Ala	Ala	Ala					Glu			Thr	Met
ЦСИ	2290		01			2295				1	2300				
Mot	His		Cln	Gln	Cvs			Lan	LOU	T. 🗕 11			Val	Cvs	Cvs
		PIO	GIII	GIII			ьeu		пец	2315		nrg	Vai	Cys	232
230		_	-						T			C1-	C1-	71.	
Ser	Pro	Pro	Leu			Thr	Pro	GTA			THE	GTU	GIII		
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His	His	His			His	Pro	Asn								
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